

OCT 31 2006

REMARKS/ARGUMENTS

The claims are 2, 3, 6-8, 12, 14-27 and 34-35, with claims 28-33 having been withdrawn from consideration by the Examiner as directed to a non-elected invention. Claim 34 has been amended to better define the invention, and claim 13 has been canceled in favor of new claim 35. In addition, claim 11 has been canceled, and claims 2, 3, 6-8, 12, 14-15, 17-19, 21-22, 25 and 34 have been amended to change "lattice element" or "elements" to --grid member-- or --members--, or to remove reference numerals. The specification has been amended to insert the heading "Brief Description of the Drawings" on page 11. Support for the claims may be found, *inter alia*, in the disclosure at page 6, third full paragraph, at page 7, first full paragraph, at page 9, second full paragraph, and in the drawings. Reconsideration is expressly requested.

The Disclosure was objected to as lacking the heading "Brief Description of the Drawings". In response, Applicant has amended the specification to add this heading as requested by the Examiner, and it is respectfully requested that the objection to the specification on this basis be withdrawn.

Claims 2-3, 6-8, 11-27 and 34 were rejected under 35 U.S.C. 112, first paragraph, because these claims had been amended to use the phrase "lattice elements" instead of --grid members-- as used originally. Applicant believes the terms are interchangeable. In any event, in response, Applicant has amended the claims to use the term --grid members-- as requested by the Examiner, and respectfully requests that the objection to the claims under 35 U.S.C. 112, first paragraph, on the basis of this informality be withdrawn.

Claims 6-8, 12, 15 and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Persson et al.* U.S. Patent No. 5,076,924 in view of *Denton et al.* U.S. Patent Application Publication No. 2002/0144942. Claims 2, 7-8, 12, 14, 17-19, 26-27 and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Lisson et al.* U.S. Patent No. 6,096,117 in view of *Denton et al.* Claims 2, 7-8, 12, 16, 20-22, 26-27 and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Simone* U.S. Patent No. 6,514,408 in view of *Denton et al.* Claims 3, 11-12, 14, 20, 22-27 and 34 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Adams et al.* U.S. Patent Application Publication No. 2002/0130064 in view of *Denton et al.* Claim 13 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Simone* in view of *Sprenger et al.* U.S. Patent No. 6,415,930.

Essentially, the Examiner's position is that each of *Persson et al.*, *Lisson et al.*, *Simone*, and *Adams et al.* discloses the filter material recited in the claims except for the filter material having more than 20 welded connections per one square centimeter and one of the lattice elements or grid members having openings with a diameter less than two millimeters, that *Denton et al.* discloses this feature, and that it would have been a matter of routine experimentation to find the optimum number of weld joints to secure two lattice elements or grid elements together to form a filter material. *Sprenger et al.* was recited with respect to claim 13 as teaching a filter material comprising a coarser lattice element or grid member 12 disposed between two finer structures 14 and 16.

The Examiner has also taken the position that *Denton et al.* suggests that the filter screen 16 is welded to filter media 14 at about 7 to about 20 attachment points per axial inch on the peaks of filter media pleat 24, and that it would not have been inventive to discover the optimum or workable ranges by routine experimentation when the general conditions of a claim are disclosed in the prior art.

This rejection is respectfully traversed.

As set forth in claim 34 as amended, and in new claim 35, Applicant's invention provides a filter material comprising first and second stacked substantially planar sheet metal grid members having a welded connection between the grid members. The filter material has more than 20 welded connections per 1.0 square centimeter, and at least one of the grid members has openings with a diameter of less than 2.0 mm. Claim 35 further specifies a third stacked substantially planar sheet metal grid member wherein the second grid member has a coarser structure than the first and third grid members and is disposed between the first and third grid members, and at least one of the first and third grid members has openings with a diameter of less than 2.0 mm.

In this way, Applicant's invention provides a filter material which permits two grid members to be welded together with little destruction of the grid structure during the welding process so as not to negatively affect the filter function of the filter material. With Applicant's filter material, localized welding of the individual grid members suffices to provide a strong bond between the grid members and to increase the serviceable filter area and provide a greater degree of flexibility in forming the filter material as compared to known filter materials.

None of the cited references discloses or suggests a filter material including first and second stacked substantially planar sheet metal grid members having more than 20 welded connections per 1.0 square centimeter, where at least one of the grid members has openings with a diameter of less than 2.0 mm as recited in claim 34 as amended, and in new claim 35.

As the Examiner has recognized, none of the primary references to *Persson et al.*, *Lisson et al.*, *Simone*, or *Adams et al.* discloses or suggests a filter material with more than 20 welded connections per 1.0 square centimeter. Although the Examiner has taken the position that one skilled in the art would have modified the filter material of the primary references, in view of *Denton et al.*, it is respectfully submitted that one skilled in the art would have no reason to do so.

In *Denton et al.*, the filter material is curved or bent, and the weld joints are only on the bent portion. With this special arrangement, there is no problem to locate a lot of weld joints near to each other as long as the welds remain on the curved portion. See e.g., FIGS. 1 and 9b of *Denton et al.* In contrast, Applicant's filter material contains substantially planar sheet metal grid members which lie parallel to each other, and it has

previously been believed that it was not possible to weld such flat grid members together without destroying in the welding process the actual grid structure of the grid members. In other words, there is nothing in *Denton et al.* with its curved filter material that would lead one skilled in the art to modify the primary references in an effort to make Applicant's filter material having more than 20 welded connections per 1.0 square centimeter.

New claim 35 further species first, second and third grid members, with the second grid member being disposed between the first and third grid members and having a coarser structure than the first and third grid members. As the Examiner has recognized, this feature is nowhere disclosed or suggested by any of the primary references. Although the Examiner has taken the position that *Sprenger et al.* discloses a coarser lattice element 12 disposed between two finer structures 14, 16, it should be noted that the support screen 12 of *Sprenger et al.*'s cartridge is formed from a reinforced plastic to which the non-woven polymer layers 14, 16 are adhered. Accordingly, even if one were to make the hypothetical combination as suggested by the Examiner, one would still not achieve Applicant's filter material as recited in new claim 35 in which substantially planar sheet metal grid members are arranged so that the second grid member

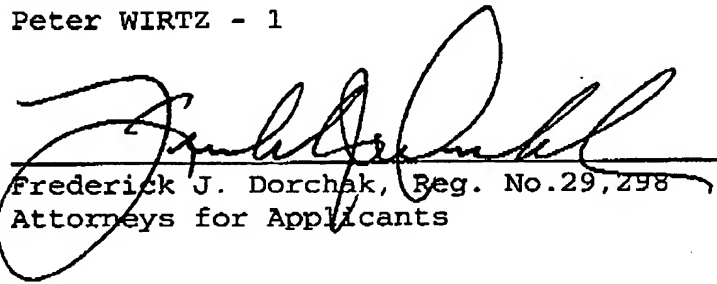
with a coarser structure is disposed between the first and third grid members having a finer structure. Accordingly, it is respectfully submitted that new claim 35 is patentable over the cited art for this additional reason.

In summary, claims 2, 3, 6-8, 12, 14-15, 17-19, 21-22, 25 and 34 have been amended, claims 11 and 13 have been canceled, and new claim 35 has been added. The specification has also been amended. In view of the foregoing, withdrawal of the final action and allowance of this application are respectfully requested.

Respectfully submitted,

Peter WIRTZ - 1

COLLARD & ROE, P.C.
1077 Northern Boulevard
Roslyn, New York 11576
(516) 365-9802
FJD:djp



Frederick J. Dorchak, Reg. No. 29,298
Attorneys for Applicants

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Fax No. 571-273-8300

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Frederick J. Dorchak